THE LANCET.

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SURGICAL LECTURES,

DELIVERED BY

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LECTURE 6.

GENTLEMEN,

IT is very difficult to explain at all times exactly what I mean—very difficult; I am always doubting whether you understand me or not.

In my last lecture I attempted to describe the nature of a peculiar kind of inflammation which has been called Chronic, and the disorganizing effects it produced in structures which it attacked. I wished you to understand from what I said, that the *morbid actions* of vessels led to a *morbid deposition* of matter, which would not take place in a healthy state of the constitution; that this morbid deposition of matter becomes the foundation for a new growth of vessels; or, as it has been said, becomes the *nidus* for their formation. I said also, that it was by the continuance of these actions that *morbid structures* were built up, and the natural structures destroyed; now there are also *morbid secretions* produced by these actions which tend to keep up the irritation produced by the disease.

There are it is evident, also certain *morbid propensities* to disease, and there is only one way in which this can be explained. A certain harmony in the office of all the structures of the body is necessary to constitute the state of health; disturb the functions of one part, and you will, to a greater or less degree, disturb the whole. Continue the cause of disturbance, and you will have disordered actions produced somewhere, but if any part, by formation or the influence of habit, be weaker than another, we shall, in all probability, find that part most disturbed. It is to prevent this tendency to diseased action, by an attention to the general health, that constitutes the principal point in the practice of our profession. Inflammation and sloughing, as I told you, may supervene in the newly-formed structures, and thus the character of the disease be altogether changed; and to what can you attribute this, but to some derangement which is produced in the general health? I say, that this tendency to diseased structure is what we have principally to guard against in the practice of surgery. And that there is something unhealthy in the constitution which peculiarly modifies local disease has been abundantly proved; it is what we have to counteract by all the means in our power.

There is, however, a *morbid increased action* in the part; and I know of nothing so calculated to diminish it, as the *diminution of the heat* of the part, not to that degree which would kill the part, but to such an extent as I mentioned when speaking of the regulation of temperature. But there is another mode, it is this; you may lessen increased action *locally*, by lessening the quantity of blood circulating in the vessels of the part. Blood is the natural stimulus to the vessels, and, by taking away blood, you diminish the action of these vessels; therefore it is that you put on leeches. Now as many or all of these diseases are connected with a bad state of health, take care that you do not weaken too much. Put on a few leeches once or twice in the week, never more than six or eight at the most at one time; but this number once in the week will generally be sufficient. Do not put on so many, or

put them on so frequently as to induce weakness. At the same time, I do not say that the application of leeches does that good in cases of purely chronic inflammation, which in more active inflammation they do. They do some good, but not to that degree which would warrant me in recommending them as a surgical means likely to prove beneficial. But if a more active state of inflammation should supervene on the chronic, then their application would be not only useful, but necessary.

It is very wrong frequently to touch local diseases, and it is no unusual thing to see some surgeons handle a part very roughly, in order, as they say, to examine it; and you will often see the patients themselves examining the parts in the same way, by pinching them about. A touch is a bruise to a local disease, and many times have I seen persons keeping up their disease by repeated examination of the lumps which they may have had in their bodies. I can tell you a case in which you have a very good proof of the impropriety of the practice.

A lady had a small tumour in her breast, she consulted a surgeon, and he ordered leeches to be applied; the leech-bites produced an extreme degree of erysipelatous inflammation, which extended over the surrounding parts, and had an appearance that the surgeon and the patient did not like. The lady became alarmed, and I was sent for, and I met the gentleman at the lady's house; he happened in the hearing of the patient to say, "Mr. Abernethy, don't you consider it a very unusual occurrence, to follow the application of leeches?" Nay, Sir, said I, certainly not, it is a thing which frequently happens in irritable constitutions, let me say, in persons who have much disorder of the digestive organs. "Lord, Sir!" said the patient, "that is my case, that is exactly my case—what must I do?" I ordered a bread and water poultice to be applied to the part, made in the way I told you a short time since; advised her to try to keep her bowels regular, and to tranquillize the disorder of the digestive organs. The lady then said, "Will you be good enough to feel this lump; did you ever know such a lump as mine is?" Yes, said I, many, and if you attend to what I have told you the lump will soon disappear. So it did; it very soon got well, and she went into the country. Four or five years afterwards she returned with a similar lump; I told her that she must attend to her diet, and adopt the use of some mild aperients to regulate the bowels, and that this lump would go away also. But, to my astonishment, it did not go away, the lump did not subside. I called several times, I believe for many weeks, and could not account for the obstinacy with which this lump remained. One day I observed her fingering and pressing about the tumour, and I said, Pray, madam, do you finger it in this way frequently? "O! yes, continually." I insist on it, then, that you promise me immediately that you will not touch it again for a week, or until I next see you. She did so, and the swelling soon subsided.

By soothing applications chronic swellings may remain stationary for many months, or even years; but still there is swelling; and the object is to get rid of it by causing the absorbents to take up what has been effused. For this purpose surgeons have adopted a stimulating plan of treatment; they have employed such substances as will irritate the skin and produce pimples, and they have therefore called them *Rubefacients*, such as the volatile liniment, liniments made with oil of amber, and other stimulating oils. They have employed *Frictions* for the same purpose, either made simply with the hand, with brushes, or with some ointment, as the camphorated mercurial ointment. You may electrify such swellings, and, if properly managed, with very great advantage. You may also bandage them, to make pressure on the swelling, and so on. If I were to discuss each of these methods to their full extent, it would lead me very much out of my way indeed. But the cases which I shall have hereafter to mention to you will exhibit the advantage to be obtained from each in the most plain and manifest manner. But what I have to say as a *general rule* for the application of all these methods is this, *all increase of morbid actions* should have completely *subsided before* you adopt a *stimulating plan* of treatment.

If you do not attend to this circumstance and begin your frictions and your rubefacients before the inflammatory action has subsided, you can only expect that the disease will become worse. But first diminish this action by the application of leeches, and the regulation of temperature; then apply your stimulants to the surface, and commence your frictions, but take care that you do not by these induce any inflammation in the diseased part, and your frictions and stimulants will prove beneficial. The effects of friction are so strikingly useful that I shall leave what I have to say on this subject, until by a recital of cases I shall convince you in the best possible manner. Stimulating the surface, producing what is called *counter irritation*, is a very good mode of removing some indolent swellings, such as by blisters, and the tartar emetic ointment. Then there is *bandaging*.—Oh! bandaging is made of very great utility in surgical practice, but, as I have already said, I shall leave it until we come to that part where its effects will be more declaratory.

Electricity is a part of surgical practice which may be considered as an *unique*. All the other means which I have before mentioned operate on the surface, but electricity will pervade the very centre of the body. It may be so managed as to be made to pervade a tumour even in the abdomen. It is a species of stimulation, and may be applied in various degrees of force. Much disputation has been raised as to the manner in which electricity operates on the nervous energy; but I shall speak of it here as a stimulant operating on a local disease. Now with regard to its application, you must modify it according to the tenderness of the part; if you stimulate the part too much you will produce inflammation, and the tumour will increase. Now, electrify one swelling, and the swelling subsides, electrify another, and it will increase. What can we think of it? and think we must; why, we must consider that it acts as a stimulant and increases the action of a part; that if the swelling is disposed to disperse, it disperses; and if disposed to suppurate, it goes on to suppuration. You should begin with very small charges of electricity. You would like the patient to feel it a little; let it be managed so as to produce a feeling of warmth and tingling in the part, and let that feeling subside, if you saw that it did not increase the action too much; then touch it up again, and you might increase the force of the charge. I have very frequently heard people say, if you speak to them on the subject of electricity, Oh! I do not think it ever does any good, I have given it a very fair trial, I was electrified every other day for two months. All this is very possible, and they might have been electrified for two years, without any benefit, unless there be some precise mode adopted for its employment, and the effect which it produces be regarded. Oh! hang it, hang it, this is the worst thing that can ever be done; it is this practising without intellect that constitutes empiricism; it is blindly adopting, in this way, a power without a principle to guide it, that I abhor above all things.

Now comes *counter irritation*, a part of surgery which is always liable to be abused. The way in which it is frequently done is like what has been said of the tinkers, that they mend one hole and make two, and so to mend one disease they often make another.

"Where the greater malady is fixed, the lesser is not felt." But surgeons, by their mismanagement, often produce a greater disease, and the original "hides its diminished head." (Accompanied with one of Mr. Abernethy's knowing looks.) Well, but properly managed, it is productive of great benefit. To speak first of *blistering:* you need not apply a blister a foot square in order to derive advantage from it; oh! no. But blister a small part of the surface of a large swelling at a time. Quiz it as they like, it is a very useful procedure. Yet there is sometimes more harm than good done by it, for it should be always recollected that you are making a second disease for the system; there is one which nature has produced, and there is another which you have produced for her, and therefore the both may very much irritate the constitution. For all local diseases are very much connected with the state of the general health; disturb

the general health, and you will do more harm than your counter irritation will do good.

There are various modes of producing counter irritation; you may do it by a vinegar poultice, a poultice made of the grounds of stale beer; by the tartar emetic ointment; by blistering, as I before mentioned; by making rowels, as I call them, that is, by putting in setons, and by making issues. Blistering may be considered one of the mildest of them, yet a blister, oh! a blister is a horrible thing in an irritable system, and disturbs the general health more than you would suppose. There is only one lenient mode of blistering that I know of, and that is, to put a blister on a part of the surface of a chronic swelling, and let it abide on for twelve hours, then snip the cuticle, let out the serum, and dress it with the spermaceti cerate; when this has healed, apply another blister on the adjoining surface, and so on, in succession, over the whole swelling. But to dress a blister in the way it is usually done, is dreadful; to take away the cuticle, and apply savine cerate, it is tormenting; it disturbs an irritable constitution to a degree that no one who has not witnessed its effects could suppose. Here, again, is a subject on which I shall have to say more hereafter. You can never learn surgery from one of my Lectures, for one part of surgical practice so explains another, that it may be said to be contained in a circle, and one part is imperfect without the other part.

Now, then, we come to the *setons*, rowels, as I call them; you pinch up the skin, thrust a skewer through it, and then let a large piece of silk remain in the opening you have made; you pull this backwards and forwards every day, to keep up the irritation, and if this be not sufficient, you put some stimulating ointment on the silk, and pull it through again; but then, oh! hang it, it is very tormenting indeed. I cannot say that I admire these setons, I never did, and I do not think I ever shall; I should never think of using them, except where I could not put in issues.

But I hold an *issue* to be the most lenient, and the most effective counter irritant; and when I have to keep up this counter irritation for a long time, I generally make an issue; what I say is, let me have a chronic remedy for a chronic disease. You may make a sore upon the skin with a hot iron if you like, and they say that it is the most lenient way, if it be hot enough, and a good deal has been said in its commendation; but there is something so formidable in this mode of producing an ulcer, that it would completely terrify some persons; I do not like it, and I never did like it. Now if I had to make a sore upon the skin, with the intention of keeping that sore open as an issue, I should make it with a caustic, but not such a caustic as would spread all round the place on which it was originally applied, and produce a sore twice as large as I intended; this would be just as bad as the hot iron, in my opinion. Now I like the old caustic best, that is, the caustic made with the potash and quick lime, for with it you may destroy just as much of the skin as you like, and no more. This caustic might be applied with so much precision, that I would engage to sketch out upon the skin any fantastical figure that you would tell me, aye, even if it were such a one as George and the Dragon. (A laugh.) The way in which this is to be applied, is the following: you take a piece of adhesive plaster, and cut a hole in it of the size that you wish the caustic to be applied; you put this on the skin, and over it put another piece of plaster of the same shape; you go on putting one piece over the other, until you have formed a cavity in the centre to hold the caustic; you then take a piece of the caustic I have last mentioned, wet it a little, put it into the hollow on the skin, and over it put another piece of plaster. The patient says, "Oh, dear, how nice and cold it feels!" You let it remain there about four hours and a half, or five hours, and before that time he finds out that it is not quite so comfortable; you take it off, and you find that there is a good eschar produced. The skin is not a black eschar, like it is after applying the other caustic, but nearly of the natural appearance; this comes away in a few days, and you have a wound produced of exactly the dimensions you

intended. If you wish it to discharge much, you may dress it with some stimulating application. Peas are commonly used for this purpose, but I considered that there was great inconvenience attending the daily changing of the peas, and was induced to substitute some glass beads. The wound can only heal from the edges, and if you place any foreign body there, you prevent the process of cicatrization as entirely as if you were to cover the whole surface of the wound. What I have recommended, is a string of small glass beads to be placed round the margin of the circular sore, which become in a few days buried in the granulations, and give no further trouble. Mr. BRODIE has said, that the best plan is to touch the sore over, when necessary, with a little pure potash.

This disease, of which I have been speaking, is one which builds up unnatural structures, and destroys the natural form of such parts as it may attack; it is a disease which requires the greatest skill to subdue of any which comes within the practice of surgery; but the principal way in which relief is to be obtained, is by first attempting to lessen the increased action; and that I think is best to be done in the way which I have already pointed out. Next to this in efficacy, is the employment of counter irritation by the use of issues, and you will see in the practice of this Hospital numerous cases in which this treatment will succeed; it generally succeeds, unless it is counteracted by the morbid state of the constitution. A chronic remedy, I say, for a chronic disease.

The consideration of chronic inflammation has brought me to a subject of some importance in surgical practice, which is the description and classification of tumours. Here, perhaps, I shall trespass as much against the usual import of the word, as my predecessors have done in point of nosological arrangement, although I think the classification which I have formed will be found the most useful which I could adopt. I shall exclude from the *meaning* of *tumour* any enlargement of a part which had an original existence in the human body, and confine the term to the *swellings* of such parts as had *no existence* in the *original compages of the body*. Some tumours are built up which have *no investing capsule;* these are composed principally of extension of the natural structures, by some faulty action being induced in the vessels of the part, and by this faulty action a peculiar structure is raised, altogether differing from the structures of the surrounding parts. Other tumours have a *distinct investing member*, and are principally composed of a material which is secreted or elaborated from that capsule; and this will form a very important *distinction* in the subject of *tumours*. In my next Lecture I shall consider the various kinds of tumours which I have attempted to reduce to a methodical arrangement.

LECTURES

ON THE

PRINCIPLES AND PRACTICE OF PHYSIC,

BY DR. ARMSTRONG.

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LECTURE 5.

GENTLEMEN,

In my last Lecture I spoke of the *remote causes of common inflammatory fever*, which you know are either predisposing or exciting. The predisposing causes are those which give a tendency or liability to disorder or disease. The exciting causes are those which occasion either the one or the other, according to the intensities of their application, or the predisposition of the parts attacked.

I would strongly recommend you to arrange all your knowledge under distinct heads; if you do not do so, your brains will be complete lumber houses, and you will never be able to call forth the particular information on that point on which it may be required. I have, myself, been accustomed to arrange my ideas under particular classes, and I have found the greatest benefit from this plan in my pathological and practical investigations.

But to return—you must remember that the *predisposing causes* of inflammation admit of divisions and subdivisions.

1. *Hereditary*: the likeness which exists in the countenances and forms of particular individuals of the same family may be considered as a proof of this; and if Lord BACON's hint had been followed up, I have no doubt but that we should have found the *internal* likenesses of the body still more remarkably to prevail in the same families. RAY long since observed, that there is a greater irregularity in the distribution of the arteries and veins on the surface of the body than internal organs. Now admitting this to be the case, we may infer why certain families should have a greater tendency to certain diseases than others, from peculiarities of internal structure. 2. Predisposition is what I have termed *atal*, or connected with age. 3. It is *sexual*. 4. It is an *acquired* predisposition, which admits of four subdivisions. I. Some latent fault, the effect of improper habits, or of previous disorder or disease, which leaves some latent fault. II. The temporary increase of the nervous sensibility and the muscular contractility of the body, which may arise from an impression made on a part or on the whole of the nervous system. You must never consider any individual safe who has a permanently furred tongue, for that generally attends the above condition, associated with topical tendencies. III. General debility, which is most remarkable in weak convalescents, in whom a relapse is particularly apt to occur. IV. General and local plethora; the first consisting in an universal overplus of blood, the last in an excessive turgescence of particular structures only. Both these states powerfully predispose, and at last even excite disturbance.

I spoke also of the *remote exciting causes* of common simple and common inflammatory fever, and I endeavoured to explain when fever stands in the relation of a cause, and when of an effect to inflammation.

When fever takes place indirectly through depression, and when in its course some part previously weak becomes inflamed, then the fever must be considered as the cause of inflammation, since it is the antecedent in the series of symptoms. If fever arise from stimulation, and if in its progress inflammation appear, that inflammation is in like manner the effect of fever, because it is consequent, or follows the latter. But when some irritation is immediately applied to the body sufficient to produce not local simple excitement, but an actual inflammation, then the fever which follows must unquestionably be regarded as its effect. *Irritation* is a word which has been used very loosely, as I before observed; but I use this term now to express those two local conditions, namely, local simple excitement and local inflammation, which I have shown to be different in some respects, by a reference to familiar facts.

I had occasion to notice certain hypotheses, broached by individuals whom I really respect, because they have furnished something to the stock of general science; but separating their conjectures I have deemed it right to protest against them, because they are fallacious, and even dangerous, when applied to practice. Whatever doctrines I may have already inculcated respecting fever; whatever doctrines I may hereafter inculcate on other points, I wish you only to consider, that you may compare them with facts and admit none but those which your own observation confirms. All human opinions are either false or true: bend to no human authority, ancient or modern, in medical science; bend only to the truth. You have a very easy mode of ascertaining whether what a man says is true or false, by referring to facts, which is the test which you should always apply. I have endeavoured to show, in the preceding lectures, that there are two states on which the two varieties of fever already described principally depend, namely, the state of congestion and the state of simple excitement. The state of simple excitement may exist without inflammation; and again, inflammation may exist without any symptoms of fever. Inflammation, therefore, is not an essential part of fever. A common boil is illustrative of this if the system be in a healthy state, otherwise neither the nervous system nor the heart is

disturbed, consequently you perceive no fever; inflammation, in a word, then occurs without fever. Besides all the signs of perfect congestive fever are opposed to those of inflammation. Having premised these remarks, let us, before proceeding further, inquire what is meant by the word inflammation, since it is important that the meaning of every such word employed should be clearly explained. *Inflammation* is merely an abstract term, comprehending the selection and combination of certain symptoms. *What are these selected and combined symptoms?* They are the following: 1st. *Heat;* 2. *Redness;* 3. *Pain;* and 4. *Swelling.* You will find that CELSUS considered these four symptoms as the indications of inflammation; and all medical men have agreed, since his time, that these are the most characteristic signs of that complicated state called inflammation.

The next thing is to inquire, what are the *pathological conditions* indicated by these signs, which must not be confounded with the conditions on which they depend. To take a distinct view of this subject, we must separate it into parts; and therefore I shall begin by considering the state of the *vascular system.* It appears that the capillary vessels, the minute termination of the arteries and the veins, if we except the absorbents, are the immediate seat of inflammation. But *three circumstances* take place in the vessels merely of an *inflamed part*, *two* of which are connected with the *capillary* vessels, and the *third* with the *larger* vessels.

The changes which take place in the capillary vessels are the following: *First,* These capillaries, which convey a colourless fluid in health, now that the part is inflamed, *convey red blood.* You have a very conspicuous instance of this in an inflammation of the eye, the conjunctiva of which is blanched and colourless in health, but it becomes inflamed, and the vessels then admit the red particles. The *second* change which takes place in the capillary vessels is, that their *diameter is increased;* we have an evidence of it in inflamed conjunctiva, and also a direct one after death; every anatomist knowing that the vessels of an inflamed part admit of a more easy injection than the vessels of an uninflamed part. The *third* change which takes place in the vessels of an inflamed part is to be found in the *larger vessels,* both arteries and veins. The larger arteries leading to the inflamed part, and the larger veins leading from the inflamed part, are alike over-distended. This appears explicable on two principles: I. The over-accumulation of heat in the inflamed part, relatively to that of an adjacent healthy structure; and, II. The probable interruption to the circulation of the blood through the capillaries of the inflamed part, so that an over-distension and turgescence of blood there must be the consequence. We have proofs of this, as I shall presently show you, meaning to keep to facts, and, as far as is possible, to exclude mere conjectures. With respect to the large arteries and veins being over-distended, we have distinct evidences of the fact. Let the right hand and wrist be inflamed, as in acute rheumatism, the heat will not only be somewhat higher than that of the opposite hand; but if you examine the pulse at the radial artery leading to the inflamed hand, and compare it with the pulse at the radial artery of the other hand, you will find that it is of a larger volume, that it seems to contain more blood than the other. The carotid artery affords another example: let the brain be inflamed, open the shirt collar, and you will perceive that the carotids are more distended than natural. As to the veins, if the throat be inflamed, on examination you will see, especially by the light of a clear sun, the veins rambling over the fauces much more distended with blood than is natural. Here, then, are three changes connected with the vessels of the inflamed part.

We may briefly attempt to explain the leading *phenomena* of common inflammation. The first of these you know is *heat.* The heat of an inflamed part is always something relatively higher than the heat of an uninflamed part on the surface of the body, not, perhaps, at all higher than the heat at the heart, where it is about 100°, whilst the superficial parts are about 96 or 98°. There is in the healthy condition of the body a remarkable uniformity in the distribu-

tion of the animal heat, and it is one means of preserving the healthy condition of the capillary system. Let a part be long kept below, or raised above the natural standard, certainly a change takes place in the capillary system, the blood being deficient in the one case, excessive in the other there; a certain uniformity of heat is then very important in preserving the healthy state of the capillary circulation.

In the healthy, a very remarkable relation exists between the size of the *red*, and the other *particles* of the blood, and the capacity of the capillary vessels. If you examine the web of a frog's foot through a microscope, you will see the red globules passing through certain minute vessels; but if you irritate the animal strongly, so that it struggle much, the red particles become obstructed in some branches; but then a provision is made for this obstruction, by what has been termed the anastomosing ramifications, along which, at last, the obstructed globules pass. Some relation also exists between the blood as a mass, and the vessel; if you apply two ligatures on a vessel, the blood contained between them will not coagulate so soon as it does when drawn from a vein into an ordinary cup. But, to resume the subject of inflammation, the heat is higher, relatively, in an inflamed, than in an uninflamed part. How does this arise? Sometimes it seems to arise from the impression of a foreign body acting as an irritant to the nerves, and sometimes it arises merely from a hurried circulation of the blood operating too as an irritant to some weak part. Caloric expands fluids; it expands the blood, and of course the blood expands the vessels, and in that way we might account for the redness and for the increased diameter of the vessels; though, with this condition, it is possible that the nervous energy may have some connexion. We have reason to believe that the natural relation is then lost between the size of the red particles and the capacity of the vessels. Two of the symptoms then of inflammation, the heat and redness, have been accounted for in some degree.

The next point for consideration is the *pain*. We know that the blood materially influences the sensibility of the body. There is an accumulation of blood about an inflamed part, and therefore its sensibility is increased for a certain time. A very curious fact appears to show that the sensibility very much depends on the kind of blood; venous blood is not so calculated to maintain sensibility as the arterial. If an intense inflammation take place in the bronchial lining, the blood at last is not properly decarbonised, or oxygenated, and it seems to act on the brain as a complete narcotic, smothering the sensibility. In such cases there is often no pain felt, even when the brain is much inflamed. Some structures are more sensitive than others, giving, therefore, more pain when inflamed; and if such a part be put upon the stretch, it causes still greater pain. If inflammation, for example, take place about the finger or toe, the patient has very great pain; but this subsides when the distension is removed by the evacuation of a little matter. The fourth and last symptom is *swelling*. The blood is expanded by the heat, the vessels are consequently dilated with blood, and the part swells; but there is another concurrent cause of swelling, namely, the effusion of fluid into the surrounding cellular membrane.

The next point to inquire into is the *state of the larger vessels*, both arteries and veins, connected with the inflamed part. There are *two reasons*, perhaps, why the larger arteries leading to the inflamed part should be *over distended*; the first is, the increased heat about that part, and the second probably is, some interruption to the passage of the blood through the capillary vessels there, by which the arteries leading to the part become surcharged. Take, for example, an inflammation of the right wrist; you perceive that the arteries throb very violently which lead to the inflamed part, and these arteries are said to be in a state of increased action. The term increased action, is used most incorrectly in medical writings; count the number of pulsations in the radial artery when the right wrist is inflamed, and of the carotid artery when the brain is inflamed, and they will be found to correspond to the number of contractions of the heart, and to the

pulse in every other artery. If you can have the opportunity of examining a large artery expand in the living body, you will find that it does not alternately dilate and contract, as is commonly and erroneously supposed. The truth is, that there is no such increased action at all in the vessels in or about the inflamed part, their diameters being merely increased from the causes before mentioned.

It has been said, that the capillary vessels have the power of circulating the blood in the human body, independently of the heart's action, and this has been inferred by applying a ligature on the aorta, near the heart, the circulation still going on for some time afterwards. This, however, might be accounted for upon the ordinary laws of nature. Observe the tide passing up a river; it goes on flowing and flowing till it becomes level with the banks; but it begins to ebb at the mouth of the river, while it continues still to flow a few miles higher up, from the impulse first communicated. It was upon this principle Newton supposed, that the tides would continue to ebb and flow for some time as usual, if the moon and the sun were removed from our planetary system. We need not be surprised, then, that the blood should circulate for some time when the forcing power of the heart has been withdrawn.

The *capillary vessels*, however, are endowed with their proper powers. The first is *elasticity*, which exists not only during, but after life; the second power is *contractility*, by which they accommodate themselves to their contents, and this only exists during life. There are many facts to show that the capillary, and even larger vessels, have these properties. In the summer, the veins on the surface of the body are remarkably distended; there are then some pounds of blood circulating on the surface of the body more than in the winter; and in the latter season, when the surface is cold, more is proportionably accumulated in the centre of the body. Another example is to be found after blood-letting: you bleed, say a person who has a strong large pulse, and you continue to bleed him until his pulse becomes a weak, small, fluttering thread, the arteries having contracted to the diminished size of the column of blood, for if they had not done so, the pulse would have been as expanded as before the operation.

There are not only changes taking place in the *vessels*, but even in the *blood* itself of an inflamed part. The blood, in its progress through an inflamed part, becomes darker and darker; and if the part be viewed through a microscope, the red particles appear to undergo a change, assuming a flocculent appearance, and at last absolutely stagnating in that part. If you examine it attentively, you will find that all the anastomosing branches are gorged with blood; now if there were no interruption to the passage of the blood through the inflamed part, how comes it to pass that these anastomosing branches are all overloaded with blood? We can produce inflammation in any part by interrupting the return of blood from it, as happens in the case of strangulated hernia; or in applying a ligature to any portion of the body, when you soon produce all the phenomena of inflammation. It seems therefore proved by facts, that there is a change in the condition of the capillary vessels, and also in the condition of the blood in them.

There is an hypothesis which assumes, that in these cases the vessels alternately contract and expand. There is no doubt that they possess contractility, which on certain occasions they exert, if I may so speak, but I do not think that they alternately contract and dilate. I have seen the carotid artery of a horse laid bare, and by accident likewise the arteries of the human body, yet I have never seen them contract and dilate alternately. Besides, if it were admitted that the action of the arteries is increased in the inflamed part, the blood would not circulate more rapidly there than any where else, on the known laws of motion. We have every reason to believe that there are certain laws imposed by the Deity for the regulation of organized bodies as well as of dead matter; and one of these laws is, that action is equal to re-action, but in an opposite direction; so that if one portion of an artery contracted and dilated more rapidly than another portion, the blood would not circulate

more rapidly there. But how could we tell exactly when a vessel had an increased action, even allowing it to exist? How can we measure correctly whether the red particles pass more rapidly through one part than through another? Surely we cannot detect the difference, if any, by the human eye, or any known auxiliary.

It appears, from what I have said, that the *pathological condition*, which I have termed inflammation, is the result of several concurrent states or changes in the inflamed part, and I shall now sum up these. There is, I. A change in the *nerves* of the inflamed part, the sensibility being affected; we know also that there is another change which takes place partly through the nerves, namely, the change in the heat of the parts. II. There is an expansion of the blood in the capillary vessels; their diameters are consequently increased, and in all human probability their contractility is diminished, so that the blood undergoes some interruption in its passage through them. III. There is some change in the *constitution of the blood itself*. The blood changing colour in its passage through that part, the red particles becoming flocculent, and the mass of blood there stagnating at last. Thus it is rendered nearly certain, not only that interruption occurs, but that the natural relations between the size of the blood's particles and the capacities of the capillaries are lost at the same time.

Thus far I have considered inflammation in reference to *common causes*; but, in the progress of these inquiries, when, in fact, I shall come to the consideration of the peculiar causes, it will be shown that the blood then is one of the main agents in the production of inflammation; not merely the quantity, but the kind of blood, very much modifies the character of the inflammation. Take *vaccinia* for an example, you have heat, redness, pain, and swelling; you have the combined signs of inflammation present; but as this inflammation arises from a peculiar cause, you have a peculiar appearance mixed up with the common ones. Therefore it is of very great importance to take into account the specific effects which are mixed up with the results of common causes. A small portion of *malaria* imbibed into the body inflames the brain, the spinal cord, the bronchial lining, and the lining of the small intestines at the same time; and the probability is, that it does so through the blood alone. The same appears to take place in *small pox*; the contagion of small pox inflames the skin, and in severe cases the lining of the air passages. Again, in measles and scarlatina, similar conditions occur. We have abandoned, without any good reason, the humoral pathology, as I shall hereafter more particularly explain; wishing at present chiefly to confine your attention to common inflammation; the immediate and remote effects of which will form the subject of my next Lecture.

REVIEW.

Outlines of a System of Medico-Chirurgical Education, containing Illustrations of the Application of Anatomy, Physiology, and other Sciences, to the principal Practical Points in Medicine and Surgery. With Coloured Plates. By THOMAS TURNER, Esq., M.R.C.S., and Lecturer on Anatomy, &c. 8vo., pp. 369. London: Underwood.

THE plan of the present work is new. It is an attempt to bring into one compass most of the important points in anatomy and physiology, and to show their relation to medicine and surgery, an undertaking of no small labour. The work, indeed, professes to be an outline of a system of medico-chirurgical education; a title (we say it without wishing to detract from the merits of the book) which is certainly misapplied in the present instance. The idea one would form of the work from this notice is, that it contained an ac-

count of the course of studies best fitted to qualify a person for the medical profession, the order in which the different subjects should be studied, the time necessary to be devoted to each, &c., but it treats of very different subjects—it contains useful information on anatomy and physiology, and recommends that the connexion of these with medicine and surgery should be always borne in mind by the student. This, however, does not entitle it to be called a system of education, for if it did, the term might with almost equal propriety be affixed to the title-page of every manual of anatomy. We make these remarks from no desire to be hypercritical, but because we do not wish to see the author suspected of having made use of a title-page not exactly corresponding to the contents of the work, for the purpose of enticing a customer. On this occasion we know the mistake was quite unintentional. The work is arranged under two heads: the first comprises an account of the different parts of the human body and their numerous functions, thus forming a complete manual of physiology; the second contains a more minute anatomical account of those parts, particularly of those which are connected with surgical operations and are the subject of frequent disease, as well as a description of the operations themselves. From the nature of the work it would be impossible to follow our author through all the subjects which he has touched upon, therefore we shall give a *catalogue raisonne* of the contents of the first division of the book, and then extract a passage or two which may be considered a specimen of the manner in which the work is executed.

Mr. Turner begins by giving a summary of the parts which compose the human body; then enters on the consideration of the bones, joints, and muscles, detailing at the same time every physiological fact connected with them. Lastly, the digestive and absorbent systems, the sanguiferous, respiratory, nervous and secerning systems, together with the different organs belonging to the senses, are considered at length. We shall give the author's account of the sanguiferous system.

"Having traced," says Mr. T., "the chyle and lymph to the circulating mass of blood, we are naturally induced to speak next of the sanguiferous system, including a set of organs by which the nourishment is conveyed to the different structures of the body. The sanguiferous or circulating system consists of the heart, arteries, and veins, to which we shall add the lungs, because circulation and respiration are closely allied functions.

"The heart is of a conical figure, and lies obliquely in the thorax, inclining to the left side. Its form justifies a division into base, body, and apex. From the base goes off the aorta, or principal trunk of the arterial system. This organ has four cavities,—an auricle and ventricle on the right side, and an auricle and ventricle on the left; and with these large vessels communicate. Into the right auricle the vena cava descendens, vena cava ascendens, and coronary vein, open; and there is an aperture of communication with the right ventricle. In the right ventricle are two openings, one from the auricle, the other into the pulmonary artery. In the left auricle we observe the entrances of four pulmonary veins, and a hole into the ventricle; and in the left ventricle we find the opening just spoken of, and another leading to the aorta.

"The structure of the heart is muscular, but its substance is not uniform

in thickness; the reason of which is obvious. It seems to be a law in nature, that no part of the animal economy shall be endowed with more energy than is necessary for the due and regular execution of its function; hence a difference is made in the thickness of the parietes of the heart. The right and left auricles have thin muscular walls, but they possess a sufficient degree of power for the purpose required, viz., that of sending the blood into the right and left ventricles, which are close at hand. The parietes of the right ventricle are more slender than those of the left, because less force of contractility is demanded to transmit the blood through the lungs, than to propel it (as the left ventricle does in great measure) throughout the arterial system. An examination of the structures of the cavities of the heart will assist us in explaining how the sides of each are approximated; how the blood is expelled; and how a retrograde course of this fluid is guarded against. The course of the blood is determined by the mechanism of the valves.

"The valves are flood-gates, which permit the passage of the blood in one direction only. They are thus named: the valve between the vena cava inferior and the right auricle is called the valvula eustachii; that at the termination of the coronary vein, the valvula semilunaris; that between the right auricle and right ventricle, the tricuspid, or mitral valve. The three valves at the root of the pulmonary artery are named, from their figure, the valvulæ semilunares. Between the pulmonary veins and the left auricle there are no valves. Between the left auricle and left ventricle we find the bicuspid valve; and between the left ventricle and root of the aorta are the three valvulæ semilunares. The mechanism of these membranous structures bespeaks a beautiful adaptation of means to the fulfilment of an end, which could not be dispensed with. They sometimes become ossified; this destroys their function, and in time proves fatal to the individual who is the subject of this morbid change.

"The assistance which anatomy lends to physiology is forcibly illustrated by the important fruits of HARVEY's industry and observation. One of the principal circumstances which led him to detect the course of the current of the blood, was an examination of the manner in which the valves are disposed. Other anatomists before him showed an imperfect knowledge of some of the facts which he afterwards elucidated; therefore, Harvey derived assistance from the labours of his predecessors; but to him only are we indebted for correct and scientific views of the subject, and, consequently, to him is due the honour of a discovery far more interesting and useful than any other that has been deposited in the archives of medical literature.

"The mechanical arrangement of the different parts of the heart positively shows that the blood can only circulate in a direction determined by that particular arrangement. It must go from the right auricle into the right ventricle; from the ventricle through the lungs; from the lungs to the left auricle; from the left auricle to the left ventricle; from the ventricle to the aorta; and from the aorta throughout the arterial and venous systems, back again to the right side of the heart.

"The ARTERIES are the vessels which convey the blood from the heart to the different structures of the body. They originate in two main trunks, viz.,—the pulmonary artery and aorta: the pulmonary artery arises from the right ventricle of the heart, and is distributed to the lungs; the aorta springs from the left ventricle, and divides and sub-divides into branches, which go to all the other organized parts of the body. After its origin, the aorta forms a curvature or arch, from which part vessels branch off to the neck, head, and upper extremities. It then descends on the left of the spine; and whilst in the chest sends off the intercostal, æsophageal, and bronchial branches. After emerging from the thorax, it begins to supply the abdominal viscera; some of its branches are azygous or single, others are in pairs. The single branches are the cardiac, the superior and inferior mesenteric, which are distributed to the stomach, liver, spleen, pancreas, and intestines. The double branches are the diaphragmatic, the renal, the spermatic, and the

lumbar. At the fourth or fifth lumbar vertebræ, the aorta bifurcates into the common iliac arteries. Each common iliac subdivides into an internal and external branch; the internal principally supplies the pelvic viscera; the external passes under Poupart's ligament to the lower extremity. This is a general idea of the distribution of the arterial system. The arteries terminate in six ways:—in anastomosing with other branches; in veins; in the excretory ducts of the glands; in exhalent vessels; in cells; and in colourless or serous branches. In their course, from their origin to their terminations, some branches pass off from the trunks, at acute angles; others more obtusely. After making their angles and flexions, they run for the most part in a straight direction; with the exception of such arteries as supply parts which are subject to be stretched, or where a contrivance is necessary in order to break the force of circulation; thus in the lips, uterus, and brain, they take a tortuous or serpentine course. An artery is a tube composed of coats, which coats have vasa vasorum, lymphatics, and nerves. They are three in number, and named the cellular or elastic, the muscular, and the membranous.

"The VEINS are those vessels which return the blood of the arteries back again to the heart. They arise from two sources, viz.,—from the extremities of arteries and from cells, and terminate in the auricles of the heart. The veins of the head, neck, and upper extremities, end in the vena cava superior; those of the lower extremities, abdomen, and thorax, in the vena cava inferior; those of the heart, in the coronary veins; and those of the lungs in the four pulmonary veins, which terminate in the left auricle of the heart. The veins may be divided into two sets—the cutaneous and deep; the latter set for the most part accompanies the arteries. Between the two sets there are very free communications; a fact well demonstrated by the effect of grasping at the time of bleeding from the arm.

"The veins, like the arteries, have three coats, but they are all much thinner; hence the difference in the thickness of the walls of the two orders. But the veins of the extremities differ from the arteries in having valves which serve to support the column of blood; this, if allowed to gravitate, would be an almost insuperable obstacle to the circulation in the extreme veins, which is principally of a *vis à tergo* kind. When the valves do not perform their functions well, that knotted appearance of the veins known by the name of varix takes place, and is productive often of serious inconvenience.

"The pulse is the effect of the action of the heart upon the blood, which action causes an elongation as well as a dilatation of the artery in which the pulse is felt. The pulsations at the wrist do not take place at the same moment of time as those of the carotid and other arteries near the heart; the interval is long or short in proportion to the distance of the vessel from the heart, the reason of which is obvious. At the adult age, in a state of health, the pulse is equal, regular, and has a moderate degree of power, but age, temperament, stature and disease occasion varieties in it.

"At birth, the number of pulsations in a minute is about 140, at the age of twelve months, 120, at the age of two years, 110; at the age of three, 96; at the age of seven years, 86; at puberty, about 80; at the adult period, 75; and at sixty years of age, 60."

After giving an account of the respiratory system, and the changes which the blood undergoes in its course through the lungs, Mr. TURNER proceeds to the composition of the blood itself.

"The blood is that fluid which circulates in the cavities of the heart, arteries and veins. In man it is of a red colour, but in some animals it is colourless. Whilst circulating, and immediately after being drawn from an artery or a vein, it appears an homogeneous mass; but soon after being taken from the vessel it loses its uniform consistence, and resolves itself into two parts, serum and crassamentum.

"By exposing the serum to a temperature of 150 or 160 degrees, it assumes a solid form; the substance, in chemical language, is called albumen;

and by slicing and squeezing it, a small quantity of fluid may be expressed, which is called the serosity of the blood. According to Dr. MARCETT's analysis of human serum, a thousand parts contain of

Water	900·00
Albumen	86·80
Muriates of potass and soda	6·60
Muco-extractive matter	4·00
Subcarbonate of soda	1·65
Sulphate of potass	0·35
Earthy phosphates	0·60
	1000

"Berzelius's analysis is nearly similar. Serum differs from chyle in having no white particles.

"The crassamentum is composed of two substances, fibrin and red globules. The nature of fibrin is well known, but that of the red globules, or colouring matter of the blood, is still a contested point among chemists. It was believed that the red colour of the blood depended on the iron which it contained; but this opinion has been rendered questionable by the experiments of Mr. BRANDE. From them it is to be inferred that the colouring principle is an animal substance of a peculiar nature, susceptible, like the colouring matter of vegetables, of uniting with bases, and admitting probably of important uses in the art of dyeing. The blood drawn in inflammatory diseases shows a division of the two component parts of the crassamentum. What we call the "buffy coat" is pure fibrin, which is separated from the red particles in consequence of a subsidence of the latter, whose specific gravity exceeds that of any other material of the blood. In inflammation the blood is attenuated and coagulates slowly; therefore time is given for the red globules to sink below the fibrin, and this is the explanation of the phenomenon."

From this description of the heart and its functions, one may judge of the plan of the first part of the book, and the manner in which it is executed. Similar accounts of the general anatomy of the other parts of the body are given, and their offices or functions explained. In the second division a more minute anatomical account of parts is given, together with a description of most surgical operations connected with them. We think that a book of this description will be found a valuable acquisition to the medical student; it contains a body of information on general anatomy, physiology, and surgery, which should be carefully studied at the time he is following his anatomical pursuits. The object of the work is to show the relation anatomy and physiology bear to medicine and surgery, and to impress on the student's mind the importance of attending to this whilst he is engaged in his dissection of the human body. The book does not supersede the use of manuals of anatomy, but it will be found an admirable appendix to those works, and should be in the possession of every student. Nor is its usefulness merely confined to the student, but it will prove valuable as a book of reference to medical practitioners in general. Mr. TURNER does not profess to give any thing new in his work, but he has condensed into a narrow compass most of what is known on the subjects which he has handled. Conceiving that "*le plus grand avantage d'une langue est d'être clair*," Mr. T. has particularly aimed at perspicuity of style, and throughout his whole work there are very few of his statements which are not clear and distinct. We object to the title-page which Mr. TURNER has made use of, because the contents of the work do not correspond to it, but in another impression this may be easily altered; the object of the work is

good, and on the whole its execution is creditable. There are four coloured plates; the three first of which represent the fœtal membranes, the reflections of the pleura and diaphragm, and the fourth shows the manner in which the dura mater envelopes the contents of the cranium, and the relations of the sinusses of the brain to the exterior of the skull.

LONDON PHRENOLOGICAL SOCIETY.

THE first Meeting of this Society for the season was held on Saturday evening last, Nov. 6, at the Crown and Anchor Tavern.

The Chair was taken at Eight, by Dr. ELLIOTSON, the President, and the Minutes of the last meeting were read. The preparatory business having been got through, several new ordinary, corresponding, and honorary members were proposed. Many of these are likely to prove active and zealous supporters of the interests of the Society. Amongst them the names of Dr. OTTER of Copenhagen, and of Drs. GALL and SPURZHEIM, were announced.

A valuable present of casts was acknowledged, by the President, to have been received from Mr. REECE, for which the thanks of the Meeting were voted. It is to be hoped that other members will follow such a laudable example; as it is a point of the greatest importance that the collection of casts should be made as extensive as possible.

Dr. ELLIOTSON read an interesting paper on Idiotcy and Insanity; in which he showed the definition of idiotcy, as sanctioned by the law, to be incorrect. He gave some cases in which idiots could repeat tunes which they had heard, and even relate some of the principal historical events of the country in which they lived, and yet were completely idiotic in every other sense of the word. Dr. E. read the case of a child whose brain ceased to be developed after the age of three months, and she died when about two years and a quarter old. The child's head was so small, that it was pronounced, on first sight, to be an idiot. The sequel confirmed the opinion which had been formed. For several months before death the bowels were seldom moved more han once in a fortnight; and, on dissection, the colon was found to pass down the front of the abdomen, and then to return again to the curvature of the stomach, forming an immense pouch, which was much distended with fæcal matter. The child sucked, and made a grunting noise; but displayed no marks of intellect. The cast of the head of a woman, an idiot, aged 23, was pointed out, which was even smaller than that of the child: the brain only weighed twelve ounces. Dr. Elliotson observed, that idiotcy was not always the result of the shape of the brain, but sometimes appeared to depend on a softening of the texture of the brain, having at the same time a slight blue tint.

The mode of using the new *Craniometer* was shown. The Calipers having been found defective in ascertaining the relative developement of the different organs, induced some phrenologists at Edinburgh to invent the present instrument, which they have termed a Craniometer. It is a plain semicircular piece of polished iron, having at each extremity a sliding horizontal pin, with a knob at each end. These knobs are placed at the meatus auditorius externus of each side, which are in a line with the medulla oblongata, from which part all the organs are supposed to be developed. There is then a thin sliding bar connected to the arch, which is graduated, and moves at the same time very readily from one side to the other. The bases of the arch being placed at the ears, the number of inches on the graduated scale, which is above the edge of the arch, shows at once the height of any part of the cranium.

Mr. DE VILLE mentioned some facts in corroboration of the opinions delivered by Dr. Elliotson, which he had an opportunity of observing at the Salpetrié at Paris. He said that

he had seen many idiotic and insane persons possessing many of the knowing faculties to a great extent; but, as might be expected, did not manifest any of the reflecting faculties.

We have great pleasure in announcing to our readers, that Dr. SPURZHEIM will commence, early in the ensuing spring, a course of Lectures on Phrenology; that is, on the relations between the manifestations of the mind and the brain, in the healthy and in the diseased state. These lectures, with others on scientific subjects, have been very arbitrarily suppressed at Paris, by the French Government; and we hope that Dr. Spurzheim will, by the attendance of a numerous class, have the best proof afforded him of the progress of Phrenology in the estimation of the Profession, and of the public of this Metropolis.

The Meeting was adjourned until that day fortnight.

FOREIGN DEPARTMENT.

ANALYSIS OF FOREIGN MEDICAL JOURNALS.

ARCHIVES GENERALES—SEPTEMBER.

The articles in this Number, which our readers will find most interesting, are, a Synoptical Table, containing the physical, chemical, medicinal, and deleterious properties of the immediate vegetable principles, and of the alcoloids recently discovered, by M. JULIA FONTANELLE; a few Clinical Observations on Medicine and Surgery, by M. JANSON; and an account read at one of the meetings of the ROYAL ACADEMY, on the comparative mortality in the indigent and wealthy classes. The following table will be found particularly useful to every practitioner;—

SYNOPTICAL TABLE

Of the Physical, Chemical, Medicinal, and Deleterious Properties of the immediate Vegetable Principles, and of the Alcoloids recently discovered.
By M. JULIA FONTANELLE.

N. B.—The termination in *ine* is applied to alkaline substances, and that in *in* to those which are not alkaline.

NAME of the Substances, of their Discoverers, and their Natural Conditions.	PHYSICAL PROPERTIES.	CHEMICAL PROPERTIES.	MEDICINAL AND DELETERIOUS PROPERTIES.
1. ATROPINE. Discovered by *Brandes*, in the atropa belladonna.	Inodorous, insipid; crystallizes in prismatic needles; colourless: turns green the syrup of violets.	Is decomposed by the action of caloric: almost insoluble in water, alcohol, and ether; neutralizes much acid and produces salts, the watery solutions of which give out by evaporation vapours which dilate the pupil and act as narcotics.	Is the deleterious principle of the *Belladonna*.
2. BRUCINE. Disc. in 1819, by *MM. Pelletier* and *Caventou*, in the false angustura, in the state of a gallate.	In leaf-shaped masses, of a pearly white, having the appearance of the boric acid; and sometimes in elongated prisms; in-	Fusible at 102° Centigrade, congealing as it cools: is decomposed by a higher temperature: inalterable by the air: soluble in 500 parts of boiling water, and in 850 of cold: remaining in the state of a hy-	This poison acts on the spinal chord, producing tetanic contractions of the muscles. May be given in paralysis from a dose of one-eighth of a grain to five grains in the day.

NAME of the Substances, of their Discoverers, and their Natural Conditions.	PHYSICAL PROPERTIES.	CHEMICAL PROPERTIES.	MEDICINAL AND DELETERIOUS PROPERTIES.
	odorous, bitter, pungent, and acrid; turning the syrup of violets to green.	drate, and retaining one-fifth of water: soluble in alcohol, almost in all proportions, and but little so in ether: forms salts, which are poisonous, bitter, crystallizable, and which may be decomposed by morphine. Is turned to a crimson red by concentrated nitric acid. This colour is changed by caloric to yellow; in this state the hydro-chlorate of tin forms with it a beautiful violet precipitate, a character which is peculiar to brucine. It is composed of 75·4 of carbon, 11·21 of oxygen; 7·22 azote; 6·53 of hydrogen.	Four grains is sufficient to kill a rabbit; the same dose, however, does not kill a dog.
3. CATHARTINE. Discovered in 1820, by *MM. Lassaigne* and *Feneulle*, in the pods and leaves of senna.	Solid; yellowish brown; odour peculiar; nauseous and bitter.	Attracts humidity from the air; is decomposed by calorie; very soluble in water, alcohol, and ether; is decomposed by the concentrated acids.	Is the cathartic principle of senna.
4. CINCHONINE. Discovered by *Duncan*, in cinchona bark.	White; crystallizes in needles; inodorous; bitter; turns the tincture of violets to green.	Part is composed and part volatilized by calorie: it burns without leaving a residuum. In contact with the air, it passes, in time, into a state of a carbonate; soluble in 25·0 parts of boiling water; soluble in alcohol; very little so in ether; is capable of saturating more acid than the *quinine* is, and forms, with acetic acid, an incrystallizable salt, yet the acetate of *quinine* crystallizes. It is composed of carbon, 76·97; oxygen, 7·97; azote, 9·02; hydrogen, 6·22.	Its medicinal properties are the same as those of quinine, with this difference, that it takes five times as many parts, by weight, *of cinchonine*, to produce the same effects as one of *quinine*. It is nearly out of use.
5. CYSTISIN. Discovered in 1820, by *MM. Lassaigne* and *Chevallier*, in the seeds of the *cytisus laburnum*.	Solid; yellowish green; disagreeable taste.	Decomposed by heat, as also by concentrated acids; very soluble in water, alcohol, and ether. It contains no azote.	In the dose of eight grains it occasions vertigo, cramp of the stomach, and vomiting, which sometimes continue for two hours.
6. DELPHINE. Discovered in 1819, by *MM. Lassaigne* and *Feneulle*, in the seeds of staves-acre (*delphinium staphysagria.*)	A whitish, crystalline, and moist powder; inodorous; acrid, and very bitter: turns syrup of violets to green.	Fusible, and gives, on its cooling, a hard and brittle substance; at a higher temperature it is decomposed, and burns without residue. Nearly insoluble in water, but very soluble in alcohol and ether. It forms neutral salts, which are acrid, very bitter, and soluble. Concentrated nitric acid gives a yellow tint to this alcali that differs from the red colour which the action of this acid on *brucine* and *morphine* produces. Not analyzed.	Its effects are much more energetic than those produced by the staves-acre. Six grains kill a dog in the space of two or three hours. In the state of an acetate, it is still more poisonous.

NAME of the Substances, of their Discoverers, and their Natural Conditions.	PHYSICAL PROPERTIES.	CHEMICAL PROPERTIES.	MEDICINAL AND DELETERIOUS PROPERTIES.
7. *DIGITALINE. Thoughts of its existence entertained by *M M. Lassaigne & Chevallier*; actually discovered by *M. Le Royer*, in 1824, in the leaves of the *digitalis purpurea*.	Microscopic crystals, in straight prisms, with rhomboidal bases; inodorous; very bitter: turns syrup of violets green.	Decomposed by caloric: very deliquescent: very soluble in water, alcohol, & ether. The action of acids on it has not yet been well investigated.	Half a grain dissolved in two drams of lukewarm water, and injected into the veins of a cat, killed it in a quarter of an hour, without occasioning any appearance of pain. One grain and a half injected into the jugular vein of a dog produced the same effect. The blood of animals thus poisoned assumed a vinous tint, and a slight tendency to coagulate.
8. EMETINE. Disc. in 1817, by *M M. Pelletier* and *Magendie*, in the roots of the *viola emetica*, *callicocca ipecacuanha*, and *psycotria emetica*, and by *M. Boullay* in the violet.	When pure, it is in a white powder, inodorous, and slightly bitter: turns syrup of violets green.	Fusible at 50° Centigrade. Above that it is decomposed. It becomes opaque on exposure to the air: little soluble in water, but very soluble in alcohol and ether. It only produces with acids, crystallizable salts with excess of acid, which are decomposed by the alcalies and magnesia. Galls precipitate it in flocculi of a dirty white. It is composed of carbon, 64·57; oxygen, 22·95; azote, 4·09; hydrogen, 7·77.	It is the emetic principle of ipecacuanha. Its activity is such that one-sixteenth of a grain produces vomiting. The dose is one grain for adults. In that of two it has killed a dog.
9. GENTIANIN. Found by *M M. Henry* and *Caventou*, in the root of gentian.	In small yellow needles, inodorous, and very bitter.	By the action of caloric, part of it sublimes in yellow needles, and the rest is decomposed: is not changed by the action of the air: soluble in water; communicates to it a strong bitterness: very soluble in alcohol and ether; soluble in acids. (The concentrated sulphuric acid carbonizes it.)	A very energetic tonic and febrifuge.
10. IODE. Disc. in 1813, by *Courtois*, in the mother waters of soda, as it is obtained from the sea-weed.	In a kind of bluish laminæ: odour that of cloruret of sulphur. A simple body.	Fusible at 107° Centigrade. It boils at 175°, and escapes in violet-coloured vapours: is not changed by the air. Soluble in 7000 parts of water; soluble in ether, and more so in alcohol in proportion as the spirit is rectified. These solutions change the colour of the skin to yellow. With oxygen it forms the iodic acid, and with hydrogen the hydriotic acid.	Used in the treatment of goitre, scrofula, chlorosis, cancer of the womb; of white swellings, tumours, scrofulous phthisis, inveterate syphilitic indurations of the glands, &c. It is employed in substance, in an alcoholic tincture, in the state of a salt and as a pomade. In the dose of from one dram to one and a half it proves fatal, and produces ulceration of the mucous coat of the stomach.
11. LUPULIN. By *M. Planche*, and nearly at the same time by *MM. Ives*, *Payen* and *Chevallier*, in the yellow matter of the flowers of hops.	Solid, of a yellowish white; aromatic & very bitter.	Decomposed by caloric: is not changed by air: soluble in water, alcohol, and ether.	Tonic and narcotic; not poisonous. Doses not yet determined.

* The discovery of this substance we were the first to make known in this country.—Ed. L.

NAME of the Substances, of their Discoverers, and their Natural Conditions.	PHYSICAL PROPERTIES.	CHEMICAL PROPERTIES.	MEDICINAL AND DELETERIOUS PROPERTIES.
12. **MORPHINE.** Disc. in 1817, by *Sertuerner*, in opium, in the state of a meconiate.	White crystals in rectangular prisms: inodorous; insipid; solutions bitter: turns syrup of violets green.	Melts, and is decomposed at a slightly elevated temperature. Unchanged by the air: insoluble in cold water: soluble in 42 parts of cold alcohol, and in 8 of ether. Its salts are bitter. Nitric acid turns it red; hence it is an important test of the presence of this substance. Morphine is composed of carbon, 71·01; oxygen, 17·28; azote, 5·177; hydrogen, 6·533.	Narcotic, without the inconveniences of opium. *M. Bally* thinks that it is as active as its acetate, to which the preference is given on account of its solubility: as this salt is difficult to crystallize, and to preserve the sulphate appears preferable. The dose of these two salts is from one-fourth or one-third of a grain a day, in pills or in a syrup, to four grains a day. It is a poison which has become celebrated in the annals of crime.
13. **NARCOTINE.** Discov. in 1802, constituting one-fiftieth of opium, by *M. Derosne*, who named it *opiane*.	In delicate needles, or in rhomboidal prisms. Inodorous and insipid.	It melts like fat and is decomposed: unchanged by the air; slightly soluble in water: soluble in 24 of boiling alcohol, or in 100 cold: soluble in cold ether: forms poisonous salts. Composed of carbon, 68·88; oxygen, 18·00; azote, 7·21; hydrogen, 5·91.	Seems to act as a narcotic. *M. Bally* has given it to the extent of 60 grains, without obtaining very remarkable effects from it. Its acetate, in the dose of a grain, has killed a dog.
14. **PICROTOXINE.** Disc. by *Boullay*, in the *coccus orientalis* (the fruit of the *menispermum cocculus*.)	In quadrilateral white prisms: inodorous; very bitter. Turns syrup of violets green.	Decomposed by caloric: unchanged by the air: soluble in 25 parts of boiling water and 50 of cold: soluble in 3 of alcohol; and very soluble in ether. Forms very bitter salts, which are but little soluble in water.	It is to this substance that the *coccus orientalis* owes its deleterious properties: three or four grains of it kills the largest dog in an hour. It is also a most active poison for fish.
15. **PIPERIN.** Dis. by *Œrstaed*, in black pepper.	In colourless and transparent prisms; inodorous, and almost insipid.	It melts, and becomes decomposed: unchanged by the air: insoluble in cold water; very slightly soluble in boiling water: very soluble in alcohol and ether.	According to *Bertini*, *Meli*, *Micclini*, *Simonetti*, and *Simiscalchi*, it is a most energetic febrifuge, and in a much smaller dose than the sulphate of quinine. It may be carried as far as 24 grains in the 24 hours. Fifty or sixty grains are sufficient for the cure of an intermittent.
16. **QUININE.** Disc. 1820, by *MM. Pelletier* and *Caventou*, in the cinchona.	White and incrystallizable: inodorous: very bitter. Turns syrup of violets green.	It melts, becomes idioelectric, and assumes, by friction with woollen cloth, the resinous electricity: is unchangeable in the air: soluble in 700 parts of water: soluble in alcohol, and still more so in ether: forms very bitter salts, of a pearly hue: saturates less acid than the *cinchonine*, and gives a crystallizable acetate. Is composed of carbon, 74·56; oxygen, 7·7; azote, 10·84; hydrogen, 6·90.	Its virtues are the same as the cinchona bark, but much more energetic. The sulphate of quinine is preferred. Four grains of this salt is equal to two drams of the bark. This alcali and its salts are five times more energetic than the cinchonine and its sulphate.
17. **RHUBARBARIN.** Disc. by *Pfaff*, in the rhubarb cultivated in Europe.	Solid: dark brown: opaque: odour disagreeable: bitter and nauseous taste.	Decomposed by heat: deliquescent: very soluble in water, alcohol, and ether. Nitric acid converts it into oxalic acid.	It appears to be the medicinal principle of rhubarb.

NAME of the Substances, of their Discoverers, and their Natural Conditions.	PHYSICAL PROPERTIES.	CHEMICAL PROPERTIES.	MEDICINAL AND DELETERIOUS PROPERTIES.
18. SCILLITIN. Disc. by *Vogel*, in the bulbs of the *scilla maritima*.	White; brittle; transparent; inodorous: fracture resinous: and bitter taste.	Decomposed by heat: deliquescent: very soluble in water, alcohol, and ether. The action of acids on it not yet ascertained.	The medicinal principle of the squill: it excites vomiting, the secretion of urine, and diarrhœa.
19. SOLANINE. Disc. in 1821, by *Desfosse*, in the *solanum dulcamara* and in the *boletus esculentus*.	White: granular; or in quadrilateral microscopic prisms: inodorous: slightly bitter and nauseous. Turns syrup of violets green.	Decomposed by heat: unchanged by the air: insoluble in cold water: soluble in 8000 parts of boiling water: little soluble in alcohol and ether: forms incrystallizable and bitter salts, which, on evaporation, give a gummy mass.	Excites vomiting and sleep. Its acetate has only been as yet tried. Its effects have been little attended to.
20. STRYCHNINE. Disc. in 1818, by *MM. Pelletier* and *Caventou*, in the *nux vomica* and the bean of St. Ignatius.	In a white opaque, & sometimes pearly powder: inodorous: intolerably bitter. Turns the syrup of violets green.	Neither fusible nor volatile: unchanged by the air: soluble in 6667 parts of water at 10° R., or 2500 of boiling water. Its solutions have an orange colour: a solution of one-six hundred thousandth part of a grain imparts a bitter taste: very soluble in alcohol: insoluble in ether. Forms some crystallizable salts, more poisonous than the strychnine. Composed of carbon, 78·22; oxygen, 6·38; azote, 8·92; hydrogen, 6·54.	This is the most active poison of all the vegetable alcaloids. It is twelve times more active than *brucine*: one eighth of a grain kills the strongest dog, and one fourth of a grain produces on a healthy man very deleterious effects.
21. VERATRINE. Disc. in 1819, by *MM. Pelletier* and *Caventou*, in the cevadilla, white hellebore, and in the colchicum.	A white inodorous powder: taste acrid and burning. Turns the syrup of violets green.	Fusible at 50° Cent.: on cooling, it presents a translucid mass of an amber colour: unchanged in the air: soluble in 1000 parts of boiling water: very soluble in alcohol: insoluble in ether. Its salts are incrystallizable. Composed of carbon, 66·75; oxygen, 19·60; azote, 5·04; hydrogen, 8·54.	A dangerous sternutatory: in a very small dose it produces vomiting and copious alvine evacuations.

A few Clinical Observations on Medicine and Surgery. By M. JANSON, Surgeon in chief to the *Hotel Dieu*, at Lyons.

THE following observations are very brief abstracts from a work published last year, entitled, "An Account of the Surgical Practice at the *Hotel Dieu*, during six years, by M. Janson." Before we proceed to give them to our readers, we cannot refrain from drawing a contrast between the conduct of hospital surgeons on the Continent, and that adopted in this country. On the Continent, not only are reports of the metropolitan hospitals regularly published, but even the practice of many of the provincial hospitals is faithfully recorded and given to the profession, whilst scarcely a volume of reports from any hospital in this metropolis (the Middlesex excepted) has ever been published. If hospital reports are of use, (and who will deny that they are?) then the medical officers of these institutions are culpable in the highest degree for neglecting to publish them, and their negligence must

be attributed either to their incapacity or indolence. If the physicians and surgeons are incompetent to discharge this part of their duty, then we would say that in all probability they are unfit to remain in their situations, which we believe is the case with too many. If, on the contrary, they are competent (and such men as ABERNETHY and LAWRENCE certainly are), but too indolent to publish for the benefit of the profession at large the numerous cases which come under their observation, then no means should be left untried to compel them to do it. If the medical officers of our metropolitan hospitals are at all anxious to obtain the approbation of the profession at large, or have any desire to stand well in the estimation of their continental brethren, they would pursue a different course, and, for their own sakes, regularly publish the results of their hospital practice. We trust that, ere long, the example now so generally set abroad will be soon followed at home.

Cataract.

We have performed the operation for cataract two hundred and fifty times, and the following are the results of the cases:—Completely cured, 166. Partially cured, 28; the patients belonging to this class having regained sight sufficient only to find their way about. Unsuccessful, 55, which reduces the successful cases to about two-thirds of the whole. We ought to observe, that in public hospitals, whatever may be the excellence of the operation, the vigilance of the surgeon, the zeal and intelligence of the persons appointed to watch the patients, there is a multitude of untoward circumstances which destroy the best grounded hopes.* It must also be stated that several patients placed among the number of those which went out as not cured, ultimately recovered their sight when the lens had become entirely absorbed. We have had several examples of this slow kind of absorption; sometimes, however, this absorption is so prompt and effectual, that it even supersedes the operation. We have observed two cases of this spontaneous cure. It is in part on this power of the absorbents that several operators give the preference to the operation by *depression*, it is the only one which we have practised, although we are far from pretending that extraction has not the same advantage in skilful hands.

Fistula Lachrymalis.

We have tried most of the modes put to the test of experience for the cure of fistula lachrymalis. Such are the introduction of a cotton mesh, a cat-gut bougie, according to HUNTER's plan, ANEL's mode, and, notwithstanding the hopes of success which their proposers hold out, the result of our cases has been altogether unsuccessful. At one time we thought that we had obtained the most splendid success from the use of the gold tube; we employed it ten or twelve times, and on the greater number of patients we were obliged to repeat the operation either on account of obstruction of the tube or displacement of the canula, which ascended so high as to get into the lachrymal sac. In the month of November, 1823, we removed a tube that we put in towards the end of 1819. These different attempts, nearly all unsuccessful, have made us give the preference to DESAULT's mode, which we have performed more than sixty times, with a slight alteration only that we have made in it.

Hernia.

The want of success attending the operation for strangulated hernia

* We must bear testimony to the truth of this assertion; for in public hospitals which have no wards expressly set apart for ophthalmic cases, the operations on the eye frequently turn out unsuccessful from the badness of the after attendance, and other causes which it is almost impossible to control.—ED. L.

is generally owing to its not being performed sufficiently early. We will take this opportunity of stating that it is extremely difficult to say with precision what the hernial sac contains. We have seen more than one case in which the general symptoms did not accord with the local alteration; we have found gangrene existing in cases of hernia where the patient had not vomited; on other occasions, conceiving that we were operating under the most unfavourable circumstances, we were altogether surprised at the slight degree of inflammation which existed.

Case of Strangulated Hernia.—Operation successful.

There are several errors in the diagnosis which it is difficult to be able to avoid; thus we have operated on two women for simple strangulation of the sac, which we found empty of all solid matter. Antoine Jardet, æt. 60, twenty years ago experienced during labour (it was her fourth confinement) acute pains in the left groin. At the end of three months a swelling appeared in that spot; the patient at first kept it supported by a bandage, then she omitted to wear one, contenting herself to reduce the hernia, each time it made its appearance. On the 19th of November, 1822, all her efforts at reducing it were unavailing, which compelled the woman to be brought to the hospital. We immediately discovered the hernia, which was strangulated, rather small and elongated, occupying the fold in the groin in the direction of the crural arch, and attended with slight swelling of the abdomen, and considerable pain extending from the tumour to the abdomen; we were unable to reduce it. The patient had constant nausea, but had not yet actually vomited. At the end of eight hours the severity of the symptoms which had been increasing determined us to operate. The hernial sac, on being exposed, presented a remarkable elasticity, punctured in the middle with the point of a bistoury, there escaped a great quantity of serum; on laying it open throughout its whole extent, we found nothing in its interior, and with the extremity of the finger carried to the femoral ring, we were enabled to ascertain the extent and nature of the contraction of this opening, into which we could scarcely introduce a small hernial knife. We divided the stricture, and the patient was then dressed. A few hours afterwards the symptoms disappeared, the wound rapidly cicatrized, the sac, which was thick and like a fibro-cartilaginous substance, came away in part, and the woman quitted the hospital fifteen days afterwards perfectly cured.

We have performed the operation for femoral hernia on ten males. In every case we divided Poupart's ligament high up and in the centre, and are convinced that the danger of hæmorrhage by this mode has been much exaggerated. It is true that we were obliged to cut with great precaution in directing the bistoury, so that the anterior fibres should be rather divided than the posterior, and that we then dilated by force with the extremity of the finger, which enabled us to feel the epigastric artery on the outside, and not far from the point at which our incision terminated. On this account we have decided on dividing Gimbernat's ligament, which offers the same advantages and much greater security. We have adopted this plan two or three times with the most perfect success, and we do not hesitate now to give it the preference in every case.

Lateral and Recto-vesical Operations for Stone.

Forty-three stone patients, of all ages, and both sexes, have undergone the lateral operation, of whom thirty-three were cured, and ten died. On the subject of the unsuccessful cases we will observe, that three or four were attended with untoward circumstances, against which the most judicious management and best performed operation can be of no use,—such are the encysted and adhering calculi. In 1822 we tried the new method, the recto-vesical operation, which was just coming into notice: we performed at first on a child three years of age, and on a young man in the prime of life. These two attempts were most successful. The child went out of the hospital at the end of six weeks, completely cured, and without fistula; and the young man after five months, with a small fistula, which soon healed. In

the course of last autumn I again performed this operation three times. The first patient presented nothing particular; he went out cured at the end of November. In the second, the bladder was ulcerated, and lined with an earthy deposit. The third had already undergone the lateral operation, and a fistula *in perinæo* had remained since. Several months afterwards the existence of another calculus was discovered. In this case the advantages of the double sound were found, and to relieve the impatience of the patient, who earnestly sought for the operation, as well as to try a plan which moreover was attended with no inconvenience, we introduced into the bladder two gum elastic sounds, the one through the usual way, the other through the fistulous opening, and thus threw into the bladder two pints of warm water every day. After the lapse of six days, the patient was operated on again, but by the rectum, and rather a large stone was extracted. The patient was perfectly cured by the operation, both of the calculous complaint and the fistula, which he had laboured under for several years. From the results of our experience, we have arrived at the conclusion that this mode of operating is not so advantageous in young infants. We operated on two in this manner in the spring of 1823, and both died of a violent inflammation of the bowels. When one reflects that, at this period of life, the rectum is endued with an exquisite sensibility, which must tend to increase the severity of the symptoms; when one thinks on the difficulties, added to the performance of the operation; the so frequent descent of the intestine; indeed if it is considered that in children there is no danger from hæmorrhage, and that the finger can be introduced into the bladder as easily by any other mode as by this; it will be sufficient to convince one that the recto-vesical operation does not offer the same advantages for the child as for the adult, and especially for persons in a very good condition of body. Thus, under these circumstances, we have renounced it, continuing our investigations in those cases where it appears to us better indicated.

Amputations.

We have had fourteen amputations of the thigh, thirty-six of the leg, ten of the fore-arm, and six of the upper-arm, making in the whole sixty-five operations, of which we lost twelve. We must not omit one remark, which is in opposition to what is commonly observed, viz., that the operations of the thigh were the most successful, since of the fourteen only one died, and whose death was without doubt less owing to the operation than to an unfortunate circumstance, which it would be useless here to relate.

We will conclude, says M. JANSON, by an observation applicable to every hospital. Exercise and repose, watchfulness and sleep, enter into the life of every man; both are indispensable to his existence; the one favours the play of his organs, supports the circulation of the fluids, facilitates nutrition; the other repairs the strength exhausted by labour, and restores to our tissues the energy which their prolonged action had deprived them of. It would be desirable that in these large establishments the convalescents could devote themselves to a kind of labour fitted to animate their languishing strength; thus we should not see so many unfortunate creatures, with the only prospect before them, after they emerge from their situation, of misery and mendicity. It is also high time that the importance of sleep and repose, after a serious operation, be taken into consideration; for how can a patient have these, if a multitude of persons are allowed to crowd around his bed, and whose presence and unguarded questions so often cause the most serious consequences.

On the Comparative Mortality in the Wealthy and Indigent Classes, by M. VILLERME.

General Assembly, August 3d.—M. VILLERME read a paper on the comparative mortality in the indigent and wealthy classes, in which he proves that the mortality is great in proportion to the poverty of the population, or, in other words, that, in a given number of persons of the same age, the chances of longevity are by far in favour of those in ease and affluence.

It is on a population of 2,000, 4,000, 10,000, 50,000, 200,000, 400,000 inhabitants, whose general condition is well known, and on the annual number of deaths that M. VILLERME rests this assertion. He shows, by comparing results obtained from several millions of inhabitants, distributed in different parts of France, that in the wealthy departments of the kingdom the common life is, on the average, longer by twelve years and a half than in those which are poor; and that in Paris there are certain districts, certain streets in which, as the inhabitants are in easy or poor circumstances, the average of a person's life is more than 42 years, or above 24 years.

M. VILLERME has added to his work the results which he observed in several prisons. He proves that in these establishments the mortality is always in an inverse ratio to the care with which they are managed, and the easy condition of the prisoners.

GERMAN JOURNALS.

GRAFE'S and WALTHER'S *Journal der Chirurgie.*

THE following reports of the Clinical Ophthalmic and Surgical Institution, at Berlin, are somewhat similar in their nature to those from the *Hotel Dieu* at *Lyons*, which we have given above. They are brief accounts of the cases which occurred at that Institution under Professor GRAFE, during 1823, abridged from the fuller accounts, which have been published in a separate volume.* The number of patients for the year 1823 amounted to 1423, of whom 1146 were cured: 266 were not regularly attended to, because they merely came to have their complaints explained to them, as they were under treatment at the same time in other hospitals. Eleven only died. There were 400 operations, the unimportant ones not counted, besides 51 ophthalmic cases, making in the whole 451. Among the patients operated on, was one of a case of stone, in a man eighty-six years of age, which is the greatest age at which the operation has ever been performed. Mr. ATTENBURROW, of Nottingham, has operated on a patient of this age; but above this age it has never been attempted.

Lithotomy.

The operation of lithotomy was performed in the course of last autumn on a man eighty-six years of age. In vain had all the usual means been made use of for the relief of the case. Driven by unremitting pain, the old man requested to be operated on, although the danger connected with the operation, on account of his advanced age, was represented to him. The stone was removed in a very few minutes: it weighed one ounce, two drachms, and ten grains. In the division of the bladder I always make use of, and with the greatest success, the cutting gorget. After remaining in the house eight weeks, the patient went home; a small fistulous opening, about two lines in length, only remaining, which, however, soon healed.

Removal of the Neck of the Uterus.

The extirpation of the neck of the uterus was undertaken on account of a cancerous affection of the part. Long-continued pains, frequent and copious hæmorrhage, and an ichorous discharge had brought on a hectic fever. Repeated examinations proved that the vaginal portion of the uterus, to the extent of three inches in diameter, was changed into a tumour, which was, in several parts, hard as ivory, rather circumscribed, and which bled on the slightest touch. For the operation, I used a firm long-handled scissors, with blunt points. By the assistance of the hand only, together with this instrument, was the neck of the uterus divided from the body; and by means of small and frequent incisions in every point, it was completely separated and removed. To stop the flow of blood, sponge, wetted with cold water, was immediately applied to the part. On the third day there came on considerable inflammation, extending from the wound to the bladder and intestinal canal, but which was fortunately subdued by

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* Siehe C. F. Gräfe's Bericht über das Clinische Chirurgisch-Augenarztliche Institut der Universität zu Berlin, für das Jahr 1823. Berlin, 1824. Bei G. Reimar.

emollient cataplasms, blood-letting, and calomel. From the twelfth day, the morbid discharge began to improve; and, towards the fourth week, entirely disappeared. Some time after the operation, it was ascertained, by repeated examination, that the disease had returned in no part; and that the vagina and mouth of the uterus formed an entire and uninterrupted cavity. On the fifth week, this patient left the Institution. Two months after, the woman was quite well, all the constitutional and local symptoms having disappeared.

New Nose.

A young man, born without a nose, underwent the taliacotian operation. The skin was taken from the forehead, as that of the arm, says P. GRAFE, did not appear sufficiently strong for the purpose. The healing of the wound is succeeding remarkably well. The close union of the parts has not yet quite taken place.

HOSPITAL REPORTS.

GUY'S HOSPITAL.

Continuation of the case of Suppuration of the Tarsal Joints, from the prick of a nail. From p. 122, *No.* 3.

WE stated, in our last notice of this case, that the constitutional irritation was on the increase, and that some doubts were entertained whether the limb could be preserved with safety to the patient or not.

Oct. 19th.—The man has had a very restless night; he complains of excessive pain in his foot; his skin is very hot, and tongue covered with a brown fur. Continue the *julep of ammonia with five drops of the tincture of opium* every six hours.

21. Notwithstanding the use of the medicine which was last ordered, and application of fomentations and poultices, the inflammation in the foot still continues very violent, and the discharge of pus is profuse. The constitutional symptoms are much aggravated, and amputation will in all probability be necessary.

22. The sufferings of the patient having continued to increase, and the injury which the joints had sustained being very considerable, added to the high degree of fever which it produced, determined the surgeons as to the propriety of removing the foot. The operation was performed by Mr. KEY. He amputated the limb below the knee by the flap operation. Three vessels were secured. Since the operation the patient has been very irritable, and the constitutional symptoms have run high: the discharge from the stump is healthy, but not too profuse. Ordered *Cal.* gr. jss.; *opium*, gr. ss., to be taken night and morning, and the effervescent mixture during the day.

25. The state of the patient has altered for the better; his pulse is more tranquil; there is a moisture on his skin, and the heat on the surface of the body is less. The patient had six hours' good sleep last night, and does not complain of so much pain in the stump as before. He is kept on the low diet, and continues the pills and the fever mixture.

28. The pulse having become very feeble, and the granulations on the stump having a languid appearance, it was thought necessary to put him on a better diet, and allow him some porter. Since this has been done, the improvement is considerable. The discharge from the stump is small, and a great part of it has united by adhesion.

31. The patient is going on very well, and the stump is improving very much. The pulse continues soft, but is fuller than before; the liberal diet on which he is now placed appears to agree very well with him.

Nov. 5. Nothing unusual has taken place within the last few days, and when any change appears we shall notice it.

Continuation of the case of Fungoid Tumour, from p. 121, *No.* 3.

After having given the history and description of this tumour in our last report, we said that we should make our readers acquainted with its termination. We did not expect to have been able to furnish them with this in so short a time; but what we have to add is briefly this. Without expe-

riencing so much uneasiness as a tumour of that size might be expected to produce; with an appetite unimpaired, and with the functions of the important organs apparently undisturbed; this unfortunate man was seized with hæmorrhage from the lower part of the tumour, which had ulcerated, on Sunday last; the bleeding, although somewhat commanded by pressure, continued more or less through the night; and it may be imagined that hæmorrhage from a large ulcerated surface was not easily suppressed. The patient complained of being sick and faint towards morning; the hæmorrhage returned; and about eleven o'clock on Monday the 1st instant he expired.

A *post mortem* examination was made of the different organs, but there was nothing to be found which could be said to have participated in the disease. The lungs, heart, kidneys, liver, mesenteric glands, and intestines were of the natural appearance. The tumour itself was separated and carefully examined; on making an incision into it, a large quantity of a highly fetid matter escaped; the cavity of the tumour appeared filled by a pultaceous, dark coloured mass, in which vessels were seen to permeate, but were easily broken down by the touch. The tumour did not involve the joint, the clavicle, or scapula. The part is preserved, and will be deposited in the museum of Guy's.

A case of Dislocation of the Humerus downwards, reduced at the expiration of 17 *days.*

A stout muscular man, of about 45 years of age, was sent into the hospital by one of the pupils, who discovered that the patient had a dislocation of the shoulder, when at the Surrey Dispensary. Some of the pupils there, after having bled him, made an attempt to reduce it, but not being able to effect it they sent him to the hospital. The parts were examined, and a dislocation into the axilla, on the left side, was clearly marked; the head of the humerus was thrown rather more forward than usual, so that it could be felt distinctly beneath the lower edge of the pectoral muscle. He took two grains of tartarized antimony, at intervals, so as to produce nausea; he was placed in a chair; the split bandage was put over the shoulder and fastened to an iron ring, on a level with the patient, and the pullies were applied with the usual precaution, and extension gradually kept up for about 25 minutes. The head of the bone was drawn out into a line with the glenoid cavity. Mr. KEY then placed the palm of his hand firmly into the axilla, and lifted the head of the bone at the same moment that he gave instructions for the towel to be cut through, and the bone slipped into its socket.

A case of Poisoning by Laudanum successfully relieved by the use of the Stomach Pump.

H. P., a young woman, aged 20, was brought into Guy's Hospital on the night of the 23d of October last, in a state of complete insensibility, said to have been produced by her having swallowed an ounce of tincture of opium.

She was brought in about 12 o'clock; the skin cold and pale; breathing slow and laborious; and the voluntary powers suspended. In this advanced stage of the case, it was immediately determined to use the stomach syringe. As soon as it could be got ready, about a pint of tepid water was introduced into the stomach, and almost directly returned strongly impregnated with the smell of opium. Another pint of fluid was injected and again returned; about nine pints of water were successively injected and the last was returned from the stomach as colourless and clear as it was introduced.

The patient soon afterwards opened her eyes, and in a short time recovered her senses. She has, within the last week, complained of a soreness in the throat and some uneasiness in the stomach, both of which have been relieved by the application of leeches, and subsequently a blister. She has taken also some effervescent mixture, and is now almost well.

A disappointment in a love affair was the cause of the rash act.

This case shows the great utility of the syringe, as it appears evident, that where the nervous energy had

been so far depressed, the stomach would have been insensible to those stimuli which usually act as emetics. Cases are almost weekly occurring in which this apparatus has been the means of rescuing the sufferers from approaching death. We consider, therefore, that it is the duty of every practitioner, or at least of every public institution, to be provided with it.

No operations of importance have been performed this week.

ST. THOMAS'S HOSPITAL.

Case of Strangulated Femoral Hernia, requiring operation.

E. W., aged 60, was admitted into Ann's Ward, in this Hospital, on Friday evening, November 5, under the care of Mr. TYRRELL. When she came in she complained of having pain in her bowels, and of being rather sick, and she said also that she had a swelling in her groin. The part was examined by the dresser, who found that there was a femoral hernia on the left side, about the size of a pullet's egg. He tried to reduce it, but could not, and was informed by the patient that it had been irreducible for six years. Finding that this was the case, he did not consider the symptoms sufficiently urgent to send for Mr. Tyrrell, and no further attempt to reduce it was made until the next day when he came to the hospital.

November 6, the woman had a weak but rather quick pulse, complained of great pain in the groin, and had vomited during the morning several times very offensive matter, having a fæcal odour. Her bowels had not been opened for six days, and the attempt at reduction having failed after employing the warm bath, Mr. T. immediately decided on performing the operation.

Operation.

An incision was made over the tumour, parallel to Poupart's ligament, which exposed the superficial fascia; another incision was made at right angles to this, upwards and inwards towards the umbilicus; the two triangular flaps of integument were then dissected back, and the superficial fascia divided on a director; the fascia propria, or forepart of the crural sheath was next exposed and divided in the same direction as the former. The hernial sac was next brought into view, and carefully laid open by scratching through the fibres of the peritoneum. The hernia was found to consist principally of omentum, which adhered very firmly to the neck of the sac, and caused great trouble in separating it; the portion of intestine was of a dark chocolate colour, and adhered but slightly. The stricture was next sought for, but it was not seated at the mouth of the hernial sac. A director was introduced, and a considerable part of Gimbernat's ligament was divided, but it was necessary also to divide a few of the fibres of the pubic portion of Poupart's before the hernia could be returned. The separation of the adhesions of the omentum from the neck of the sac gave great trouble, but was successfully accomplished. The integuments were brought nicely together, and secured by pieces of soap plaster; fomentations were afterwards ordered.

The common enema with an addition of castor oil was ordered, which procured two small evacuations. The night was passed tranquilly, and the patient slept about three hours.

Nov. 7th.—The pulse is 80, and soft. The skin hot, and the tongue furred, but not very much so. As her bowels had not been moved quite so freely as was wished, Mr. T. ordered *Ol. ricini* ℥ss.; and also directed that a little mutton brôth might be given her. The wound is rather painful; a light poultice was laid over the parts, and the fomentations of chamomile continued.

8th.—The castor oil produced three copious evacuations; the patient has had a good night, and does not complain of much pain in the wound; there is no tenderness of the abdomen on pressure. Continue the fomentations and poultice, and repeat the castor oil. A pint of milk was ordered to be taken daily.

9th.—The patient is going on very well, indeed without an unfavourable symptom. The bowels have been freely moved again this morning, the

belly is not tender when pressed on; the pulse soft and slow, the tongue slightly covered with a white fur.

(*To be continued.*)

Another case of Poisoning cured by the use of the Stomach Pump.

The patient who is the subject of this case is also a female. In a fit of jealousy she was induced to purchase *an ounce* of the *superacetate of lead*, commonly called sugar of lead, and going into a public-house asked for a glass of warm gin and water; she deliberately stirred the whole of the salt into the glass and drank it. But she had no sooner done so than her fortitude appeared to have given way, and she exclaimed, "Oh! I have poisoned myself!" Immediate inquiry was made by the persons of the house, who had her conveyed to the Hospital. The nature of the case being ascertained, it was thought better at once to use the pump than to lose time by giving emetics; some tepid water was introduced by the tube, and again withdrawn, containing large quantities of lead in solution, as was shown by the test at the time. Sufficient was used to give her a good washing out, and we are happy in being able to say that she is in a fair way to recovery.

The other operations performed are, the removal of a cartilaginous exostosis from the front of the lower jaw; the removal of a nævus from the side of the nose of a little girl; and the amputation of a finger by Mr. Green.

The principal accidents received are a fracture of the tibia and fibula; a fracture of the trochanter major; fracture of the ribs; and some lacerated and contused wounds.

WESTMINSTER HOSPITAL.

Friday, October 15, 1821, Elizabeth Percival, ætat. 63, of a full plethoric habit of body, was admitted this morning in a state of insensibility, having been just before seized with a fit of apoplexy.

On her admission, the pulse was hard and quick, beating about 70 strokes in a minute, the pupils of the eyes were not in the least degree affected by light, and the difficult stertorous breathing sufficiently declared the nature of the attack.

Twenty-four ounces of blood were immediately taken from the temporal artery, and a dose of opening medicine administered.

In the evening, as there appeared but little remission of the symptoms from the bleeding, and the bowels had not been operated upon, the aperient medicines were repeated, mustard cataplasms applied to the feet, and a large blister to the back of the neck; added to which, the head (which was shaved directly on the admission of the patient) was bathed with cold applications.

16th.—The aperient medicines have acted upon the bowels several times in the course of the night. The stertorous breathing is somewhat diminished; pulse 75, rather stronger than yesterday, though not so hard; pupils not sensible to light.

℞ *Infus. Rosæ*, ℥ viij.
Magnes. Sulph. ℥i. M. *capiat ægra cochl. magna* iij. *ter quotidie.*

17th.—Applied twenty-four leeches to the temples. Pupils not affected; pulse 75; less difficulty and stertor in breathing than yesterday; bowels open.

18th.—Purging came on yesterday evening, which continued with much violence during the night, and is still undiminished; pulse 70, and feeble.

℞. *Mist. Cretæ*, ℥ viij.
Opii, m. xl. M. *Capiat cochl. magna* iij. *3tia quaque hora.*

To-day the pupils are in a slight degree contracted upon admitting a strong light to them, after having previously closed the eye-lids for some time; and the patient appears sensible, by her trying to put out her tongue when requested, though she is still unable to speak.

20th.—Purging ceased, and the bowels become regular. Pulse 90; pupils less sensible than on Monday, and still inability to speak remains. Continue the mixture with the infusion of roses and sulphate of magnesia, prescribed on Saturday.

22d.—Bowels regular; pulse 85; breathing more difficult than yesterday.

23d.—Pulse 90; bowels not open

since yesterday morning; stertorous breathing increased.

24th.—Patient much worse; the pupils totally insensible to light; bowels costive; continual snoring.

25th.—This morning at six o'clock the patient died.

On Wednesday the head was examined. On elevating the cranium the dura mater appeared healthy, the vessels had not any turgescent appearance; the superior longitudinal sinus was found empty, but there were discovered many marks of incipient ossification. On removing the superior part of the left hemisphere, the lateral ventricle was discovered to be much enlarged and ruptured; filled with a coagulum of blood, of which there could not have been less than five ounces effused, and which not only filled the ventricle, but extended almost entirely over the centrum ovale; the right ventricle was found also to contain a small quantity of coagulum, with a considerable quantity of serum. Now, it would not appear that the woman had any excessive tendency of blood to the head, but that the rupture was caused by the diseased state of the vessels, and the extravasation had taken place before she was brought into the hospital; perhaps the bleeding, &c., might have given hertemporary relief until further effusion, which caused her death, had taken place.

Saturday, Oct. 25.—This day Mr. White extirpated the breast of a woman named Cronth, afflicted with a cancerous tumour, which had existed for ten years. Mr. White stated, that he had watched over the progress of the disease for the last two years; that he had removed several small tumours from the surface of the breast, but had deferred operating upon the cancer until the present time, because the glands of the axilla were unaffected; and he had frequently known secondary disease produced by the breast being amputated at an early period; now, however, he had determined to eradicate the disease if possible, because two glands in the axilla were felt to be much enlarged, and he was fearful that the health of the patient would suffer, if it were longer delayed.

An incision, an inch and a half in length, was first made over the surface of the enlarged glands, in the axilla, and the glands themselves brought into view, and held by a tenaculum being run through them, when they were carefully dissected out. After this, an incision was made from the sternum over the nipple, and another beneath it, and the tumour dissected off from the surface of the pectoralis major. No artery required a ligature, and the integuments were brought together by adhesive plaster.

An hour after the operation a considerable degree of hæmorrhage was discovered to be taking place; and on opening the wound, several arteries were seen emitting streams of blood, but which, at the time of the operation, did not bleed at all; and seven of them were tied before the bleeding was suppressed.

Mr. Guthrie then amputated two fingers of a woman, on which two tumours were situated, composed, as it appeared on examination afterwards, of a semi-cartilaginous matter.

Mr. White next operated for fistula in ano, and ascites; but as the cases present nothing very remarkable in themselves, we shall not lengthen our report unnecessarily by their insertion.

Thursday, Oct. 28.—Thomas Key was admitted this morning, with a high degree of inflammation, of an erysipelatous nature, upon the left arm, extending from the olecranon to the carpus. It appears that the patient, a week since, fell from a stool, and bruised his arm. It was only considered as a trivial accident at the time, and went on well for three days, a common contusion only having been produced on the fourth day: however, he drank hard, and became intoxicated, after which a more serious state came on, and the inflammation gradually attained its present height, and became attended with great constitutional derangement. The pulse to day is strong, hard, and quick, 110 in a minute; tongue much furred; great anxiety in the countenance.

℞. *Pulv. Jalapæ*, gr. xv.
Calomel, gr. v.—*M. ft. Pulv. Statim sumendus.*

A linseed poultice was immediately applied.

29th.—This morning the patient appeared rather worse than on his admission; no evacuation has been produced by the aperient powder from the bowels; the pulse on the sound arm is 110, and much the same as yesterday.

3, p. m.—Delirium has come on, and has run to so great a height as to require the application of a straight waistcoat. The arm is of a bright red colour; tongue much furred; pulse 120, strong and full; great throbbing of the temporal arteries.

Mittatur sanguis e brachio ad ℥xxv.

℞. *Magnes. Sulphatis*, ℥i.
Antimon. Tartarizat, gr. ij.
Aq. Puræ, ℥viij.—M. *Capiat ager cochl. magna* ij. *donec vomitus supervenit.*

The head has been shaved, and a cold lotion, composed of equal parts of vinegar and water, kept constantly applied to it, by means of linen rags.

30th. This morning the patient appears something better, though he passed a very restless night, delirious for the greater part of it; the arm is of a rather darker colour than yesterday, with a still darker line running on the outer side of it, parallel to the ulna; it feels tense and very hot, and an undulation, as of a fluid being contained in the cellular membrane, more particularly perceived about the elbow. The pulse is 110, not so full as yesterday. The opening medicines have acted upon the bowels several times, dark fœtid stools being produced. The tongue dry, and covered with a brown fur; pupils of the eyes contracted strongly, and great irritation exists; the patient answers in a hurried manner.

℞. *Liq. ammon. acet.*
Mist. camphoræ.
Aq. puræ. a. ℥ss.
Conf. aromat. gr. vi.
Tinct. opii. m. vi.—M. ft.
Haust. 4 tiis horis sumend.

Add to each poultice ℥iss. of alcohol to lb. j.

31st. The patient much the same as yesterday morning; very little rest procured in the night; pulse 100, full and hard. The arm inflamed as far as the insertion of the deltoid muscle; the integuments of a livid colour where the dark line was perceptible. Two incisions were made, one upon the inner side of the arm, three inches in length, and the other on the outer side, six inches; very little pain was felt, and a serous matter, mixed with dark venous blood, flowed from the wounds.

Continue the poultices with spirit.

℞. *Conf. aromat.* gr. x.
Tinctur. opii. m. vi.
Mist. camphor. ℥iss.
Aq. distillat. ℥ss.—M. ft.
Haust. 4 tiis horis sumendus.

Wine and beef-tea allowed at intervals.

In the evening he again became delirious, and required the application of the straight waistcoat.

We shall continue this case in our next report.

No accidents of importance have been received into the hospital within the last week, except a boy with an extensive burn, from the explosion of gunpowder.

TO THE READERS OF THE LANCET.

THE unparalleled patronage bestowed on this work, together with a determination to render it a perfect vehicle of professional intelligence in every department of medical science, has induced the Editor to incur a very considerable addition to his weekly expenses by continuing to print THE LANCET in the diminutive type employed in the present Number. By adopting this plan we gain a space equal to one third of the entire work; this may be instantly seen by noticing the quantity of pages occupied by the *Lectures* in our preceding Numbers as compared with the present.

This arrangement will not only enable us to continue to give *verbatim* reports of the Lectures, reviews of all works connected with the medical profession, translations of the

most approved foreign medical journals, and reports of the most valuable hospital cases, but it will likewise afford us an opportunity of inserting the communications of many intelligent correspondents, whose valuable papers we have hitherto been frequently obliged to return to them.

This augmentation of our space will also enable us, occasionally, to gratify our readers with a perusal of the philosophical essays and discoveries which frequently adorn the pages of many of the metropolitan scientific periodical journals.

With regard to our reviews of medical works, we have only to say, that the same strict independence of principle which has characterized the other departments of THE LANCET will be manifest in this. Independence has gained us success — success is the surest guarantee of independence; and the degree of success THE LANCET has now attained has placed it far above the reach of any sinister power; consequently, in our reviews of medical works we shall neither be influenced by feelings of friendship or resentment. We shall

——— "nothing extenuate
Nor set down aught in malice;"

but shall, at all times, more willingly wreathe a laurel on the brow of the meritorious than expose the machinations of intrigue or the pretensions of ignorance.

Want of space again compels us to postpone the *Middlesex Hospital Reports*, Mr. TYRRELL's pirated paragraphs, together with several valuable original papers from correspondents.

TO CORRESPONDENTS.

We thank C. R. M. *for his communication, but we shall not publish it, as our doing so would give the creature undue importance.*

The plan suggested by M. R. C. S. *is impracticable.*

R. L. *shall appear on the first opportunity.*

A CONSTANT READER *has our thanks; the hint shall not be forgotten.*

We are obliged to AMICUS, *but it is impossible to comply with his request; upon reflection he will find this to be the case.*

LAUS EQUITATIS *will find his object answered in a Letter in our next Number.*

The plan proposed by A. B. C. *cannot be adopted; the present Number must convince him that we do not object to it on the ground of additional expense. The evil complained of by* A. B. C. *is caused entirely by his Newsman; the remedy is easy—discard him.*

The Letter of AN OLD BOROUGH STUDENT *in our next.*

We do not think that the publication of the statement alluded to by SCRUTATOR *would be attended by any good effect. We are of opinion, that any Student capable of practising Surgery would not be frightened by any thing the College Examiners can either say or do. If an Examinant feel himself aggrieved, he should immediately, in a firm manner, appeal to the whole Court; should he still feel aggrieved, then let him transfer his appeal to a more just and potent power—*THE PRESS.

Before we can publish the Letter of VERITAS, *he must send us his name and address.*

The omission mentioned by STUDENS DE MEDICIS *was only temporary.*

JUVENIS *shall be inserted.*

If A. *will send us his address, we will write to him.*

We regret that the communication of H. *was not sent back as requested; it was in consequence of his Letter of the* 1st *instant having been mislaid. We fully join him in his remarks on the impropriety of giving testimonials to professional candidates, without regard to their conduct or qualifications. We fear, however, that the insertion of* H.'s *Letter would not be attended by any advantage, as it does not contain any*

remedy for the evil. The fault is in the bad system of medical education at present pursued in this country.

We do not consider that the subject of the article by MORITURUS *is exactly calculated for the pages of* THE LANCET.

The observations of C. R. *are judicious; but he will perceive, from what was said on the same subject last week, that their insertion is now unnecessary.*

CASTIGATOR *shall appear as soon as possible.*

The Letter of CHIRURGUS *contains some useful reflections, and shall be inserted in a future Number.*

The Letter of X. *has been again postponed for want of room.*

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